TABES ASSOCIATED WITH TROPHIC CHANGES SUGGESTING ACROMEGALY.[1]

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The following case, because of the trophic changes present, is of more than usual interest.

H. B., white, age 36, was admitted to the Philadelphia General Hospital, May 29, 1906. He was a stone cutter by occupation.

Family History.—The family history was negative. Father died at the age of 75; mother at the age of 74. One brother and two sisters, living and well.

Personal History.—Had none of the diseases of childhood nor any other affection of moment until twelve years ago when he contracted syphilis. Skin lesions were present subsequently.

Present Illness.—His present illness began about six years ago with shooting pains in both legs and with numbness in both feet. Shortly afterwards he began to stagger when walking and also suffered from weakness in the legs. Three years ago he was obliged to give up his work.

Condition upon Admission.—Station extremely ataxic. Gait ataxic. Is unable to walk with eyes closed. Knee jerks absent. No ankle clonus. No Babinski sign. Sensation is delayed upon both lower extremities, more on the right. There is present also some ataxia in the arms though the reflexes are normal. There is no facial inequality; no trouble in eating or swallowing; the tongue is protruded in the median line and the angles of the mouth are retracted equally well. Both pupils are widely dilated and equal. They react to accommodation but not to light. The extra-ocular muscles are apparently normal. There is no ptosis.

The patient gave his height as five feet, eleven inches. He adds also that while young he grew very fast, and was already very tall at the age of sixteen.

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[1] Read by title at the Thirty-fourth Annual Meeting of the American Neurological Association, May 20, 21 and 22, 1908.

Reëxamined, September 6, 1906, he complained of girdle sensations and also of marked constipation. There was also some difficulty in voiding urine. The biceps tendon jerks had disappeared. An ophthalmoscopic examination did not reveal any optic atrophy. Vision was good but he was unable to read for any length of time.

Reëxamined, May 6, 1907, his condition was about the same, save that gastric crises had made their appearance. At this time there were no arthropathies. Paresthesia, numbness and burning in legs and feet were complained of and tactile anesthesia was noted in both lower extremities below the knees. Pinching was felt as touch but not as pain. Further, when the toes were passively flexed or extended, the patient could not tell their position. The sense of pressure was much diminished in both legs; the patient's answers during these tests were very uncertain also as regards sensation in the hands and forearms.

An ophthalmoscopic examination, August 16, 1907, revealed the vessels to be rather small in caliber but the fundus was otherwise clear and normal. At this time also tubercle bacilli were noted in both urine and feces.

Reëxamined, October 17, 1907, symptoms suggesting acromegaly were noted. The countenance of the patient seemed to have become lengthened. The chin was enlarged and protruding, the nose was prominent and large, as were also the zygomatic arches and the occipital protuberance. The enlargement of the latter was especially pronounced.

The hands and wrists were now also noted to be enlarged. In the right wrist, for instance, the ulna was noted as of unusual thickness and breadth. This was also true of the distal portions of the metacarpal bones and the proximal and middle phalanges of the fingers. Similar changes were noted in the left wrist. Both of the feet were flattened and unusually broad, particularly was this true of the right foot. The tarsus was unusually thickened and also the proximal ends of the metatarsal bones. Both heels were much enlarged, projecting backward to a marked degree. The deformity was greater in the right foot. (The patient stated that some time ago he had received an injury of the right foot, but that it had caused him no pain.) The internal condyle of the right knee was greatly enlarged as was also that of the left, though to a less degree. An examination of the knee joints failed to reveal changes of the joint surfaces such as are commonly found in arthropathy. The joints were apparently normal, no roughness was present nor was there any effusion. The malleoli of both feet were very large, especially those of the right foot. The lower portions of the tibiæ were also much enlarged.

The left arm could not be fully extended, due to a deformity of the elbow. This the patient attributed to a fracture of the arm occurring in childhood. In the right there is marked enlargement of the internal condyle. The acromial end of the clavicle is much enlarged upon both sides, more so upon the right. The patient is much emaciated and the spinal column can be thoroughly examined. The spinous processes appear to be thickened. The ribs also are broad and thickened. There is also some dorsal curvature though the patient states that he was already somewhat bowed when a young man.

The patient states that about the time the pain in his legs began, the teeth in the upper jaw became loose and dropped out one by one. He lost all of the molars and one of the pre-molars in the left lower jaw and two of the molars, one of the pre-molars and one of the incisors in the right lower jaw. He would frequently pick out teeth when they were loose without pain.

There was also present at this examination very marked hypotonia and marked anesthesia of both lower extremities as far as upper thirds of thighs. In the hands and forearms, decided sensory loss was noted as was also sensory retardation. At this examination also dulness is noted over both apices and over the bases of both lungs.

Reëxamination of the eyes, October 22, 1907, revealed the pupils as before markedly dilated. They were as before typically Argyll-Robertson. The optic nerves showed distinct narrowing of arteries and the presence of white lines around their borders. Nerves were of good color but their appearance denoted a beginning atrophy.

December 19, 1907, it is noticed that the patient is very weak and can hardly speak. Swallowing also is quite difficult. His condition did not improve subsequently; he became gradually weaker, lost rapidly in flesh and died December 21, 1907.

Autopsy, December 22, 1907.—The general autopsy revealed tuberculosis of the lungs, chronic myocarditis and interstitial nephritis.

The brain and spinal cord were removed for examination as were also the thyroid gland, the pituitary body and both suprarenal bodies.

Hypophysis.—The hypophysis is fully twice, if not more, as large as normal. The capsule seems thicker than usual and is covered by a layer of endothelial cells. The vascularity seems somewhat increased but the vessels are normal in appearance. In the organ the vessels are normal but here and there some of the smaller ones seem to be surrounded by a thin layer of homogeneous material, probably colloid substance. The capillaries are much dilated and engorged with blood. In some areas the cell-chains are quite long. The cells themselves are quite distinct, on the whole, and respond to the stains. Some are fragmented and apparently degenerated, but these are not numerous. Several tubules are to be seen, and these contain colloid material. Along the periphery the chromatin cells are quite large and stain deeply, at times showing lighter areas in the protoplasm. These cells are both scattered and arranged in groups, but all in all they do not seem to be as numerous as they should. Such changes as appear to be present are noted in the glandular portion.

Adrenal.—Although the adrenals are larger than normal, especially the left, no marked changes are noticed save that the cells of the zona fasciculata seem to have undergone an unusual degree of fatty change, the cells having practically disappeared. The other zones appear normal. The right adrenal shows the same condition.

Thyroid Gland.—The thyroid, save for an apparent increase here and there in the connective stroma reveals no particular change. The acini vary greatly in size, some of them being excessively large. They are lined by the normal cubical epithelium. The walls show no tendency to plication and they are well filled with colloid material.

The Nervous System.—Sections of all three major portions of the cord show marked sclerosis of the posterior columns; some of the fibers along the septum and surface are still intact, while along the posterior cornua and gray commissure quite a number are unaffected.

In the present case, the trophic changes noted can hardly be regarded as having been typical of tabes. There were no arthropathies properly speaking; no changes in the synovial membranes, ligaments or cartilages, no effusion into the joints. The changes consisted in an enlargement of various prominences, of numerous bony structures and especially of the distal portions of all four extremities. They were, in short, such changes as are commonly noted in acromegaly. In this connection the findings are exceedingly interesting. In the nervous system they are evidently those of ordinary tabes. The changes in the ductless glands, while not pronounced, are nothwithstanding of special interest. The pituitary body was unquestionably enlarged, though this enlargement was far less than that met with in acromegaly ordinarily. However, such changes as were present were hypertrophic in character and were observed in the glandular portion. The changes in the adrenals consist apparently of simple hypertrophy with fatty change in the zone fasciculata. As far as the thyroid is concerned, definite changes can hardly be claimed other than some increase in the connective tissue elements of the organ.

The findings in this case are exceedingly suggestive. It is not improbable that the changes in the pituitary body bear some relation to the bony changes. The thought suggests itself that perhaps in cases of tabes generally, where there are marked trophic changes in the bones, there are also changes of the pituitary body, and it may be wise to examine the pituitary body and the other ductless glands in such cases. The internal secretions are probably destined to play an increasing rôle not only in general pathology but also in nervous pathology. Perhaps we have here a hint also for future study in other affections.